

Test Review - Identifying ionic or covalent bonds, covalent bonding, naming covalent compounds, balancing equations and types of reactions**Part I**

A. Ionic bonds form between _____ and _____

B. Covalent bonds form between _____ and _____

C. Fill in the table below. First identify the types of elements then identify whether an ionic or a covalent bond will form.

Compound	Element 1 (metal or non-metal?)	Element 2 (metal or non-metal?)	Bond Type
NO ₂	N = non-metal	O = non-metal	covalent
NaCl			
SO ₂			
MgBr ₂			
CaO			
H ₂ O			
K ₂ O			
O ₂			

D. Covalent bonds form when two non-metal elements _____ their electrons.

The elements do this so that each element ends up with a _____ outer shell.

E. Fill in the table below. Remember there can be more than one shared pair of electrons!
First draw the sharing of electrons using circles (remember there must be a circle drawn around each atom, its original electrons AND the electrons that it is sharing).
Second draw the final picture - use a dash line to show the shared pairs of electrons in the final picture, and dots to show electrons that are not part of a shared pair.

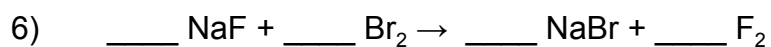
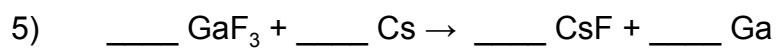
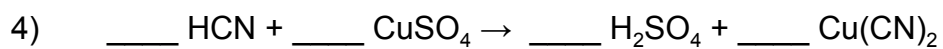
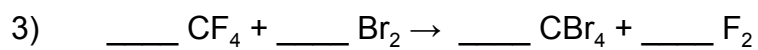
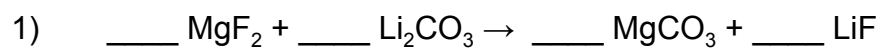
1. $\text{H} + \text{H} (\text{H}_2)$
2. $\text{F} + \text{F} (\text{F}_2)$
3. $\text{O} + \text{O} (\text{O}_2)$
4. $\text{N} + \text{N} (\text{N}_2)$
5. $\text{C} + \text{O} (\text{CO}_2)$

F. Name the following covalent compounds or write the formula. (Remember covalent compounds use the greek prefixes and all compounds second element ends with -ide)

- | | |
|---------------------------------|-----------------------------------|
| 1. CO_2 _____ | 8. Dinitrogen trioxide _____ |
| 2. CO _____ | 9. Tetracarbon decahydride _____ |
| 3. SO_2 _____ | 10. Diphosphorous pentoxide _____ |
| 4. SO_3 _____ | 11. Carbon tetrabromide _____ |
| 5. N_2O _____ | 12. Sulfur diiodide _____ |
| 6. NO _____ | |
| 7. N_2O_3 _____ | |

Part II

A. Balance the following equations:



B. Describe what happens in each type of reaction:

1. Synthesis: _____

2. Decomposition: _____

3. Single replacement: _____

4. Double replacement: _____

5. Combustion: _____

C. Identify the type of reaction:







4.